

## I. GENERAL

## PROJECT DESCRIPTION

THIS PROJECT INVOLVES THE MODIFICATION OF THE EXISTING TRAFFIC CONTROL SIGNAL WITH LIGHTING AT THE INTERSECTION OF US 50 (OCEAN GATEWAY) AND GOLF COURSE RD IN WORCESTER COUNTY. THE MODIFICATION WILL INSTALL AUDIBLE-TACTILE PEDESTRIAN PUSHBUTTONS AND CROSSWALKS ON THE NORTH, SOUTH, AND EAST LEGS. US 50 IS ASSUMED TO RUN IN AN EAST-WEST DIRECTION.

## II. INTERSECTION OPERATION

- THE INTERSECTION OPERATES IN A NEMA 6 PHASE, SEMI-ACTUATED MODE. BOTH EASTBOUND AND WESTBOUND US 50 OPERATE WITH LEAD/LAG EXCLUSIVE LEFT TURN PHASING. (US 50 WESTBOUND HAS A LAG LEFT.) AN ACTUATED AUDIBLE PEDESTRIAN PHASE SHALL BE PROVIDED TO CROSS GOLF COURSE RD. GOLF COURSE RD SOUTHBOUND AND NORTHBOUND OPERATE AS A SPLIT PHASE. ALTERNATE PEDESTRIAN PHASE WITH AUDIBLE PEDESTRIAN SIGNALS SHALL BE PROVIDED TO CROSS US 50 ON THE EAST LEG.
- A PROPOSED NEMA FULL-TRAFFIC-ACTUATED, EIGHT PHASE CONTROLLER WITH VIDEO DETECTION INTERFACE, INTERCONNECT, AND ALL NECESSARY EQUIPMENT IN A NEMA SIZE "S" BASE MOUNTED CABINET SHALL BE UTILIZED AT THIS LOCATION.

## III. SPECIAL NOTES

APS WILL FUNCTION AS FOLLOWS:  
TO CROSS US 50 (OCEAN GATEWAY)

- WHEN A PEDESTRIAN LOCATES AND PRESSES THE PUSHBUTTON FOR AN EXTENDED TIME, THE PUSHBUTTON UNIT WILL ANNOUNCE THE FOLLOWING MESSAGE: "WAIT TO CROSS OCEAN GATEWAY AT GOLF COURSE, WAIT."
- WHEN THE WALK PHASE BEGINS, THE PUSHBUTTON UNIT WILL PROVIDE A RAPID TICK WHICH WILL LAST FOR THE DURATION OF THE WALK PHASE.

TO CROSS GOLF COURSE RD

- WHEN A PEDESTRIAN LOCATES AND PRESSES THE PUSHBUTTON FOR AN EXTENDED TIME, THE PUSHBUTTON UNIT WILL ANNOUNCE THE FOLLOWING MESSAGE: "WAIT TO CROSS GOLF COURSE AT OCEAN GATEWAY, WAIT."
- WHEN THE WALK PHASE BEGINS, THE PUSHBUTTON UNIT WILL PROVIDE A RAPID TICK WHICH WILL LAST FOR THE DURATION OF THE WALK PHASE.

## CONTACTS

## DISTRICT (DISTRICT 1)

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## OFFICE OF TRAFFIC AND SAFETY

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## EQUIPMENT LIST

## A. EQUIPMENT TO BE FURNISHED BY STATE HIGHWAY ADMINISTRATION

ITEM NO.	QUANTITY	DESCRIPTION
9016	1 EA	4 CHANNEL DETECTOR AMPLIFIER
9104	1 EA	CONTROLLER CABINET, SIZE "S" W/CTRL. VIDEO INT. 1-8 CAMERAS
9109	1 EA	CABINET EXTENSION BASE, SIZE "S"
9570	38 SF	SHEET ALUMINUM GROUND MOUNTED SIGN 1 EA R1-2 - YIELD (36"X36"X36") 1 EA R4-7 - KEEP RIGHT (24"X30") 1 EA W11-2 - PEDESTRIAN CROSSING -> (36"X36") 1 EA W11-2 - PEDESTRIAN CROSSING <- (36"X36") 1 EA W16-7P(L) - (24"X12") 1 EA W16-7P(R) - (24"X12")
9571	47 SF	SHEET ALUMINUM MAST ARM/POLE MOUNTED SIGN 2 EA R10-3(1) - 'PUSH BUTTON TO CROSS OCEAN GATEWAY' (9"X15") 4 EA R10-3(1) - 'PUSH BUTTON TO CROSS GOLF COURSE RD' (9"X15") 1 EA M1-5(6) - SHIELD ASSEMBLY 'WEST US 50 <-' (48"X72") 1 EA M1-5(6) - SHIELD ASSEMBLY 'WEST US 50 ->' (30"X48")

## B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY CONTRACTOR

ITEM NO.	QUANTITY	DESCRIPTION
1001	1 EA	MAINTENANCE OF TRAFFIC
2002	3 CY	TEST PIT EXCAVATION
5003	40 LF	REMOVAL OF EXISTING PERMANENT PAVEMENT MARKING LINES
5004	420 LF	12 INCH WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES
5005	20 LF	24 INCH WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES
6001	360 LF	STANDARD TYPE A COMBINATION CURB AND GUTTER 12 INCH GUTTER PAN 8 INCH DEPTH
6002	875 SF	5 INCH CONCRETE SIDEWALK
6003	105 SF	DETECTABLE WARNING SURFACE FOR CURB RAMPS
8002	1 EA	2-WIRE CENTRAL CONTROL UNIT
8008	6 EA	AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTON STATIONS AND SIGNS
8009	5 EA	BREAKAWAY PEDESTAL POLE (ANY SIZE)
8012	1 EA	EMBEDDED METERED SERVICE PEDESTAL WITH BYPASS SWITCH
8015	6 EA	LED 16 INCH COUNTDOWN PEDESTRIAN SIGNAL HEAD
8023	1 EA	REMOVE & DISPOSE OF EQUIPMENT (PER ASSIGNMENT)
8028	5 EA	VIDEO DETECTION CAMERA AND CABLE ANY LENGTH
8033	325 LF	DISCONNECT, PULL BACK, AND RE-ROUTE CABLES
8034	420 LF	ELECTRICAL CABLE - 2-CONDUCTOR (NO. 12 AWG) TYPE T/C
8036	260 LF	UP TO 4 INCH SCHEDULE 80 RIGID PVC CONDUIT - BORED
8038	105 LF	UP TO 4 INCH SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED
8039	65 LF	WOOD SIGN SUPPORTS UP TO 4"X6"
8040	85 SF	INSTALL OVERHEAD OR GROUND MOUNTED SIGN (INCLUDING ALL HARDWARE)
8042	440 LF	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE
8045	90 LF	ELECTRICAL CABLE 1-CONDUCTOR NO. 8 AWG-THHN/THWN
8046	3 EA	FURNISH AND INSTALL ELECTRICAL HANDHOLE
8053	785 LF	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 14 AWG)
8055	875 LF	ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG)
8056	1775 LF	ELECTRICAL CABLE - 7 CONDUCTOR (NO. 14 AWG)
8062	1 EA	INSTALL CABINET AND CONTROLLER - BASE MOUNTED (ANY SIZE)

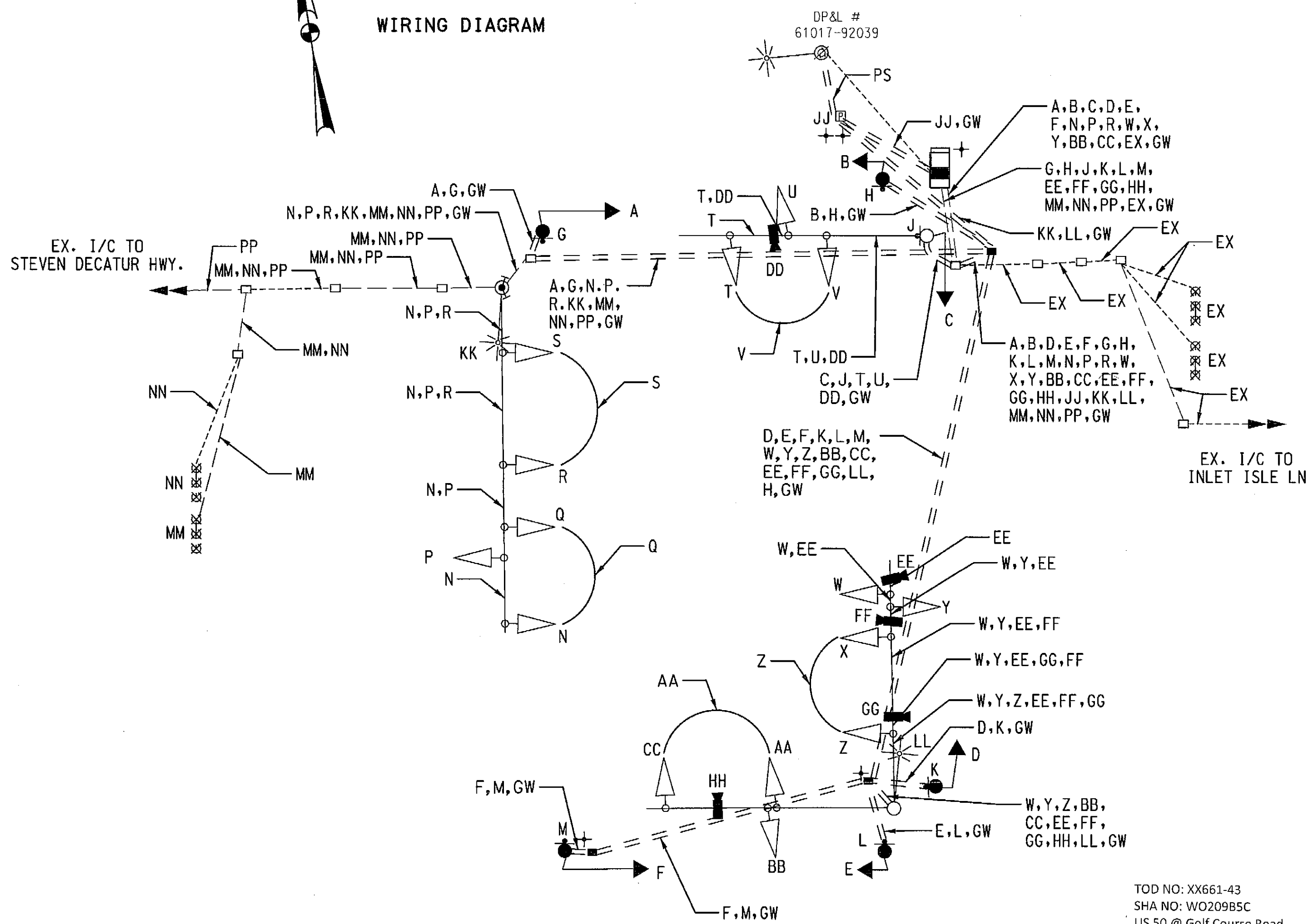
C. IF THE CABINET IS TO BE REMOVED SHA FORCES SHALL REMOVE THE CONTROLLER AND ALL AUXILIARY EQUIPMENT FROM THE CONTROLLER CABINET. THE CABINET AND ALL OTHER MATERIALS TO BE REMOVED BY THE CONTRACTOR SHALL BECOME THE PROPERTY OF THE SIGNAL CONTRACTOR UPON COMPLETION OF THE SIGNAL MODIFICATIONS.

## PHASE CHART

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
←G←	←G←	R	R	←R←	←R←	←R←	R	R	R	R	R	R	R	R	DW	WK	WK	DW	DW	DW
←Y←	←Y←	Y	Y	←Y←	←Y←	←Y←	Y	Y	Y	Y	Y	Y	Y	Y	DW	WK	WK	DW	DW	DW
←G←	←G←	G	G	←G←	←G←	←G←	G	G	G	G	G	G	G	G	DW	WK	WK	DW	DW	DW

PHASE 1 AND 6	←G←	←G←	G	G	←R←	←R←	←R←	R	R	R	R	R	R	R	R	DW	WK	WK	DW	DW	DW
1 CHANGE	←Y←	←Y←	G	G	←R←	←R←	←R←	R	R	R	R	R	R	R	R	DW	WK	WK	DW	DW	DW
PHASE 2 AND 6	←R←	←R←	G	G	←R←	←R←	←R←	G	G	R	R	R	R	R	R	WK	WK	WK	WK	DW	DW
PED CLEARANCE PHASE	←R←	←R←	G	G	←R←	←R←	←R←	G	G	R	R	R	R	R	R	WK	FLDW	FLDW	WK	DW	DW
6 CHANGE	←R←	←R←	Y	Y	←R←	←R←	←R←	G	G	R	R	R	R	R	R	WK	DW	DW	WK	DW	DW
PHASE 2 AND 5	←R←	←R←	R	R	←G←	←G←	←G←	G	G	R	R	R	R	R	R	WK	DW	DW	WK	DW	DW
PED CLEARANCE PHASE	←R←	←R←	R	R	←G←	←G←	←G←	G	G	R	R	R	R	R	R	FLDW	DW	DW	FLDW	DW	DW
2 AND 5 CHANGE	←R←	←R←	R	R	←Y←	←Y←	←Y←	Y	Y	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW
PHASE 3	←R←	←R←	R	R	←R←	←R←	←R←	R	R	R	R	R	←G←	←G←	G	DW	DW	DW	DW	DW	DW
3 CHANGE	←R←	←R←	R	R	←R←	←R←	←R←	R	R	R	R	R	Y	Y	Y	DW	DW	DW	DW	DW	DW
PHASE 4	←R←	←R←	R	R	←R←	←R←	←R←	R	R	←G←	←G←	G	R	R	R	DW	DW	DW	DW	DW	DW
4 CHANGE	←R←	←R←	R	R	←R←	←R←	←R←	R	R	Y	Y	Y	R	R	R	DW	DW	DW	DW	DW	DW
PHASE 4 ALT	←R←	←R←	R	R	←R←	←R←	←R←	R	R	←G←	←G←	G	R	R	R	DW	DW	DW	DW	WK	WK
PED CLEARANCE PHASE	←R←	←R←	R	R	←R←	←R←	←R←	R	R	←G←	←G←	G	R	R	R	DW	DW	DW	DW	FLDW	FLDW
4 ALT CHANGE	←R←	←R←	R	R	←R←	←R←	←R←	R	R	Y	Y	Y	R	R	R	DW	DW	DW	DW	DW	DW
FLASHING OPERATION	FL/R	FL/R	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R	FL/R	FL/R	DW	DW	DW	DW	DW	DW

## WIRING DIAGRAM



## WIRING KEY:

- A,B,C,D, - 5 CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)  
E,F,G,S,  
V,Z,AA
- G,H,J,K, - 2 CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)  
L,M
- N,P,R,T, - 7 CONDUCTOR ELECTRICAL CABLE (NO.14 A.W.G.)  
U,W,X,Y,  
BB,CC
- JJ - 3-1 CONDUCTOR ELECTRICAL CABLE (NO. 8 A.W.G. THHN/THWN)
- + - PROPOSED GROUND ROD
- GW - 1 CONDUCTOR (NO. 6 A.W.G.) STRANDED BARE COPPER GROUND WIRE
- PS - PROPOSED POWER SERVICE
- EX - EXISTING CABLE
- DD,EE,FF - CAMERA CABLE
- GG,HH
- KK,LL - 2 CONDUCTOR TRAY CABLE (NO. 12 AWG)
- MM,NN - EXISTING/REROUTED MICROLOOP PROBE LEAD IN CABLE
- PP - EXISTING/REROUTED I/C TO STEVEN DECATUR HWY.

**SHA**

STATE OF MARYLAND  
DEPARTMENT OF TRANSPORTATION  
STATE HIGHWAY ADMINISTRATION  
OFFICE OF TRAFFIC & SAFETY  
TRAFFIC ENGINEERING DESIGN DIVISION

US 50 & GOLF COURSE RD  
SIGNAL MODIFICATION  
OCEAN CITY, MD

## GENERAL INFORMATION SHEET

SCALE: N.T.S. DATE: 1/11/2013 CONTRACT NO. XX6615185

DESIGNED BY: E. ANDREW COUNTY: WORCESTER  
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